

LETTERS TO THE EDITOR.

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Caliatore Wood.

DURING the preparation for the press, in 1895, of the "Diary and Consultation Book of the Agent, Governor and Council of Fort St. George," for 1682-5, Mr. A. T. Pringle, the editor, inquired if I could throw any light on the origin of caliatore, a name for redwood (*Pterocarpus santalinus*), frequently referred to as an article of trade in Madras. Presuming the name to be that of a port on the east coast, it has evidently disappeared from nearly all the available gazetteers and modern atlases. Inquiries were made in London, Holland, and Java with no results; but recent researches in the libraries of Calcutta have been more successful, and the following notes on the early trade of the country form an interesting chapter on the history of red-sanders wood.

To Rumphius belongs the credit of giving the origin of the term "calitour." In "Herbarium Amboiense," 1750. vol. ii., 48, he speaks of "*Santalum rubrum*" being known in his country and in Europe, and as coming from a tree from which "*lignum calitour*" is derived. The wood is very hard, solid, and dull-red, which he says could be obtained in great abundance from the northern parts of the Coromandel coast. Various kinds of furniture were made of it, as benches and elegantly carved chairs. Only the mature trees afforded good sandalwood, as was shown in letters sent to him in 1689. The wood was also used as a tincture in the arts, and the Armenians in Shiraz and Ispahan added it to distilled spirit of wine to give it a beautiful and intense red colour. The identity of the town by Rumphius I will quote in the original Latin:—"Hisce addo ex iisdem litteris locum Caliatour quondam dictum, hodie in ora Coromandelensi hoc nomine non amplius esse notum, sed tempore mutatum fuisse in *Krusjua-Patanum*, seu *Kisjua-Patan*, ita ut primi nominis memoria inter Europæos tantum conservetur."

The town of Kistnapatam, referred to in this paragraph, is in the Nellore district of the Madras Presidency. It is now a village, situated at 14° 17' north latitude, 82 miles north of Madras; it has a fine backwater of great depth, and is a shelter for native craft during the monsoon. In an old glossary it is said to be the Greek *σωταριμα*, and "title otherwise Calitore." In a map accompanying "A True and Exact description of the most celebrated East India Coasts of Malabar and Coromandel" (1672), by (Rev.) Philip Baldaeus, Callature is shown between Armagon and Penne (Penner River). In a map of the "Peninsula deli India" (dated 1683), by Giacomo Cantelli da Vignola, a Portuguese, the town is indicated as "Caletur." It is evident that while the town was known to foreigners as Calitore or Caletur, it was not recognised by that name by the British factors.

The trees yielding red sandalwood occupy a small area including portions of the Cuddapah, Nellore, and North Arcot districts, chiefly on the Sashachellam, Lankamali, and Veligonda ranges of hills. Mr. Gamble remarks that "in range there is perhaps no important Indian tree of so circumscribed a distribution." We need not suppose that the area under *P. santalinus* has shifted its position during the past two hundred years. A glance at the map of India will show that produce from this area would find outlets on the coast at Caleture, Armagon, and Pulicat, frequented by Dutch ships in the seventeenth century. Turning to the text of Baldaeus's description of the Coromandel coast, we do not, however, find reference to the trade in redwood, but on p. 654 he says that between "Penna and Caleture" the best "Essaye Roots" are found, referring to chayroot (*Oldenlandia umbellata*); and he refers to the bark of a tree, of a darker colour, which is probably *Ventilago madraspatana*. Numerous vegetable dyes must have been in use at this time to prepare the large quantities of coloured cotton goods exported from this coast.

The earliest English factory was planted in 1625 at Masulipatam, where trade was carried on with varying

fortune for several years. In 1628 the agent, pressed by the Dutch rivalry, migrated southwards to Armegam. In 1639 Armegam in its turn gave way to Fort St. George, Madras, which in 1653 was raised to the rank of an independent presidency. Between this young growing factory and the Court of the Hon. East India Company there was considerable correspondence, and interesting extracts are made in the Diary and Consultation Book of the Agent and Governor. In their despatch dated February 8, 1681, the Court wrote as follows:—"And we do further order that you make the like provision of 300 tons Reddwood for our next yeares shipping. The Dutch call this Reddwood by the name of Calliatore wood, and we do p̄ the Nathaniell and Williamson send a pattern thereof which came from India. We are informed that it costs about 2½ Pag^o p̄ candy, they are usually in pieces of about 3 yards long but you may have it sawed into pieces of about 2 foot more or less as the Comanders shall desire for conveniency, it being to be ground to powder here and used in dying."

Contracts for the supply of the wood were negotiated by the Governor, and the question of advances was settled with the merchants. In September, 1682, the following entry in the Diary occurs:—"The Calliatore or Redwood merchants having made a contract with y^e Agent, &c., for — candy of red wood, declared that without they might have half the money before hand they could not comply with their contract w^{ch} upon their promise of giving security was granted them."

Redwood was frequently used as ballast in home-going ships. A specific case is recorded in the Diary for 1682:—"Captain Willshaw of the Resolution complained that he would not be able to ride out y^e storm without sufficient Quintelage [ballast] therefor ordered that the warehousekeeper doe lade on board him 100: Tonns salt-petre and what Calliatore wood can be got to stiffen his ship and inable him the better to ride out y^e storm."

In 1683 the Governor found it necessary to define the terms of freight with Captain Willshaw, a skipper of somewhat independent character. On January 1 the following official letter was sent to him:—"Wee do likewise acquaint you concerning Redwood or Calliatore wood that (provided you are fully laden) except you are contented to receive but half freight for it wee shall not lade any upon your ship wee being ordered to send none home upon any other terms than that to which wee desire your answer that accordingly wee may lade or not lade the same upon you." Willshaw replied:—"As to the other particulars of the redwood I shall be willing to take it in for £9 10 p̄ Tunne being the ½ freight of Grosse goods provided that according to contract your wor^d may have men aboard to saw and split it to which if yo^r wor^d and Councill will not condescend I am as ready to deliver both the petre and wood as I was willing to request the Lading it on board for the securitie of his Ma^{ties} subjects and the Companys concern therefore desire to know your Resolution till when none of the Petre or wood shall be stowed away but what is already stowed."

During the years 1683 and 1684 various payments were ordered to be made to the redwood merchants for the Honble. Company's account, and orders were regularly issued to the warehousemen to load the wood on English ships in the harbour. In order to maintain the supply in Madras, "Generalls" or letters were addressed to the northern factories in Vizagapatam and Masulipatam with requisitions for the wood to be sent down in coasting vessels.

In 1685 as much as 1337 pagodas were paid to the local redwood merchants in seven instalments during the year. Calculating the pagoda at 9s., this amounts to 605l. This, however, indicates only a portion of the trade for the year.

Reference to "The Private Diary of Ananda Ranga Pillai from 1736 to 1761" proves that the trade in red-sanders wood was still brisk. In 1743 the ship *Fleury* sailed for France with 1000 candies (candy=500 lb.) and the *Phenix* with 2000 candies of redwood. It might be mentioned that the *James and Mary*, that gave its name to the dreaded sandbank in the Hooghly, and was wrecked on September 24, 1694, carried a cargo of redwood taken up at Madras.

In the "Letters received by the East India Company

from its Servant in the East, 1602-1617," there are numerous references to the various kinds of sanders wood, but they are easily distinguished. The red sanders wood always came from the Madras coast, and was sent to Europe for dyeing purposes. The white sandal wood (*Santalum album*) was used as a perfume, for medicinal baths, and for presents. Sappan wood, sapang, patanga, or Brazil wood came from Malaya and Siam from the tree called *Caesalpinia sappan*. It was one of the "vendiblest" commodities in the trade between Siam and Japan in 1615.

There is still a demand for red sanders wood, but the drug is not of so much importance as it was years ago. The reasons are well known—on account of the artificial substitutes now employed for dyeing purposes. Evidence of this is seen in the last issue of a Madras newspaper just to hand. It describes the visit of the Governor of Madras to a large modern cotton mill. One sentence reads:—"His excellency passed on to the reeling room and then to the dye house, where the dyes used are mostly aniline dyes."

DAVID HOOPER.

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Anguillula glutinis—Paste Eels.

In Carpenter's work on the microscope, the eighth edition, so ably edited by the late Dr. Dallinger, occurs the following passage (p. 945): "This last [*A. glutinis*] frequently makes its appearance spontaneously in the midst of paste that is turning sour; but the best means of securing a supply for any occasion consists in allowing a portion of any mass of paste in which they may present themselves to dry up and then laying this by so long as it may not be wanted, to introduce it into a mass of fresh paste, which, if kept warm and moist, will be found after a few days to swarm with these curious little creatures."

As he also says that "a writhing mass of any of these species of 'eels,' is one of the most curious spectacles which the microscopist can exhibit to the unscientific observer," very many young microscopists have been led to try to obtain the eels by allowing paste to stand until sour, and also by getting dried paste known at one time to have contained "eels." Unfortunately, in this country at least so far as I know, such attempts have always failed, and I have received many letters asking for the cause of such failure.

Of course, it is generally acknowledged that no animals of the grade of these nematoid worms ever appear spontaneously; they were probably present in the water used to dilute the paste, but in paste that has been boiled and diluted with water that has been boiled they never appear, and I have tried hundreds, perhaps thousands, of experiments in this direction. And even when cold water from a pond or brook was used to dilute the paste, I never found them.

In regard to dried paste also, my experience has been different from that of Dr. Carpenter. When paste has been thoroughly dried in the open air in our climate, no eels can be made to appear by transferring some of this paste to fresh material and keeping it warm and moist. Paste may dry up to a stiff mass and the eels still live, but I have never been able to keep paste in a thin layer exposed to the air in our dry climate for one month and then resuscitate the eels. I have tried it over and over again, and the eels always disappeared. By keeping the paste slightly moist, however, the eels (or their progeny) may be kept indefinitely.

The fact that Carpenter could keep them alive after the paste had apparently dried up, may perhaps have been due to the moistness of the English climate in comparison with ours.

Fortunately, the "eels" may be found in most book-binder's paste tubs, and a sufficient amount for a start may, if properly packed, be sent by mail provided the time of transit is not more than two weeks.

JOHN PHIN.

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The Fox and the Fleas.

THE story of the fox and the fleas, published in NATURE of March 23, is not current among Celtic people only. As Bohemia is a country full of fields, pastures, ponds, brooks, and forests, the last often being inhabited by foxes, it is no wonder that my father, who was a close observer of

nature, told me the same story nearly fifty years ago. But the Bohemian fox was in one point distinguished from the English fox, for, being unable to find sheep-wool and probably not trusting to hay, and yet wishing to get rid of the fleas, he was obliged to sacrifice his own fur, and so he plucked out as much of his own wool or hair with his teeth as might easily serve to collect the fleas; and the effect was superior, for the fleas could creep into the hair without noticing any change of medium during the water trick.

As regards the question about the origin of the fleas, raised by Prof. Hughes in NATURE of April 13, my experience as an old hunter is that, at least in our comparatively dry climate, the animals living in forests have an ample opportunity of gathering fleas there. If you happen to shoot a squirrel, never put it into your bag or pocket, or else in a few minutes you will be swarming with fleas which are quickly leaving the dead animal.

Once I placed a freshly shot squirrel on a newspaper, and was surprised to find what an enormous quantity of little fleas of a peculiar kind (all these different kinds of fleas were studied by Baron Rothschild) were leaving the dead animal; and yet the squirrel lives more in the trees than on the ground, and hardly approaches stables or inhabited buildings; how much more easily can a fox collect his parasites on the ground of the forest!

Some readers of NATURE may ask what means the crayfish on the immersed tail of the left-hand side fox in the interesting figure on p. 211. To this I found an answer in the invaluable book on "Animal Intelligence" by Romanes, p. 432, according to which "Olaus witnessed the fact of a fox dropping his tail among the rocks on the sea shore to catch the crabs below, and hauling up and devouring such as laid hold of it." On the contrary, it is not clear what is the matter with the tail of the right-hand fox in the figure.

I may add that while ski-ing in deep winter in the Bohemian Forest I often watched the footsteps of different wild game in the snow, and once I found a trace of a fox without being able to tell which way he was going. After having followed it for about half a mile to the summit of a mountain, I found that the fox made a turn there and walked a long way back exactly in his own footsteps. Did he intend to conceal in which direction he was going? That the fox has sometimes this intention is shown by the fact that in the proximity of inhabited places the footsteps of the fox in the snow suddenly disappear, the fox having effaced them by his tail.

BOHUSLAV BRAUNER.

Bohemian University, Prague, April 21.

Belladonna Plaister for Bee-Stings.

SOME years ago it occurred to me to try the experiment of treating bee-stings with belladonna plaister; and, as this remedy is remarkably efficacious, and as I have met no one who was aware of the cure, I have intended for a long time to ask you to put the fact on record in your columns. If the sting is but slight, there are no unpleasant effects at all when belladonna is at once applied, and the plaister may be removed after a comparatively short time; if the sting is severe—i.e., as I suppose, if it has entered a vein—it may be necessary to retain the plaister for several days; and in such case, although there will be swelling and some irritation, both these unpleasant effects will be very notably less than in cases where no belladonna has been used. Of course, as some people are extremely susceptible to bee-poison, it is quite possible that they may not find a belladonna-treated sting so small a matter as I find it; but I presume that they will find at least a proportionate alleviation. In the summer-time my children run about the garden bare-footed, and not unfrequently they step upon a bee and get stung. At once there is a shout for "belladonna"; it is put on; and we never hear another word about the sting. I have also found belladonna give great relief from a wasp-sting. I should be very glad to hear the result if anyone living in a "mosquito"-ridden part of the country would try the experiment of applying belladonna to mosquito-bites. It might well be quite useless; but, on the other hand, it might serve.

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